

## **REMARKS**

In the Office Action mailed July 30, 2009, claim 64 was rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement, and claims 33-36, 38-50<sup>1</sup>, and 52-69 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication 2003/0032424 ("Judd") in view of U.S. Patent Application Publication No. 3006/0121944 ("Buscaglia"), U.S. Patent No. 7,203,519 ("Ylitalo"), and further in view of U.S. Patent Application Publication No. 2004/0038714 ("Rhodes"); and claims 37 and 51 under 35 U.S.C. § 103(a) as being unpatentable over Judd, Buscaglia, Ylitalo, and Rhodes, and further in view of U.S. Patent No. 7,257,425 ("Wang"). Claims 33-69 remain pending in this application, of which claims 33, 47, 61, 63, 64, and 68 are independent.

### **I. Claim Rejection Under 35 U.S.C. § 112, First Paragraph**

In the Office Action mailed July 30, 2009, claim 64 was rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. Specifically, the Office Action asserts that "[t]he Examiner cannot find support which defines the computer readable medium in applicant's specification." Applicant respectfully submits that support for "computer readable medium," as recited in Applicant's independent claim 64 can be found, for example, in Applicant's written

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<sup>1</sup> Applicant notes that the Office Action appears to contain a typographical error. Specifically, the Office Action states, in pertinent part, "[c]laims 33-36, 38-54, and 52-69 are rejected under 35 U.S.C. § 103(a)." Office Action mailed February 4, 2009 ("Office Action") at 2. Applicant notes, however, that claims 37 and 51 were separately rejected at page 11 of the Office Action. To avoid overlapping ranges of rejected claims, Applicant believes that the Examiner intended to reject claims 38-50 at page 2 rather than claims 38-54, as listed in the Office Action.

description, in the paragraph that bridges pages 6 and 7, which states, in pertinent part, “[t]he invention . . . relates to . . . a computer product which can be loaded into the memory of at least an electronic device, for instance a micro-programmable device, and containing portions of software code for implementing the method according to the invention when the product is carried out on said device.” Applicant respectfully submits that one of ordinary skill in the art at the time of filing of Applicant’s application would understand “computer product,” as the term is used in the specification, as exemplary of “computer readable medium.” Accordingly, Applicant submits that independent claim 64 is in compliance with 35 U.S.C. § 112, first paragraph and, therefore, respectfully requests reconsideration and withdrawal of the section 112, first paragraph rejection of claim 64.

**II. Claim Rejections Under 35 U.S.C. § 103(a)**

Applicant respectfully traverses the 35 U.S.C. § 103(a) rejections of claims 33-69 because the Office Action fails to establish a *prima facie* case of obviousness. In order to establish a *prima facie* case of obviousness, the record must “include[] findings of fact concerning the state of the art and the teachings of the references . . . .” The Manual of Patent Examining Procedure (“M.P.E.P.”) § 2141(II) (8th ed., rev. 7, July 2008) (relying on KSR Int’l Co. v. Teleflex Inc., 127 S. Ct. 1727, 82 U.S.P.Q.2d (BNA) 1385 (2007), and confirming the legal framework established by Graham v. John Deere Co., 383 U.S. 1, 17, 148 U.S.P.Q. 459, 467 (1966)). Moreover, “[o]nce the findings of fact are articulated, [the rejection statement] must provide an explanation to support an obviousness rejection under 35 U.S.C. [§] 103.” Id. If it is found that the prior art references fail to disclose all of the subject matter recited in a claim, the rejection

statement “must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.” M.P.E.P. § 2141(III).

Claims 33, 47, 61, 63, 64, and 68 are the only independent claims included in the claim rejections under 35 U.S.C. § 103(a), and Applicant respectfully traverses the rejection of independent claims 33, 47, 61, 63, 64, and 68 under § 103(a) at least because Judd, Buscaglia, Ylitalo, Rhodes, and Wang, regardless of whether they are viewed individually or as a whole, fail to disclose or render obvious all of the subject matter recited in any of those independent claims.

**A. Independent Claims 33, 64, and 68**

Independent claim 33, from which claims 34-36, and 38-46 ultimately depend, is directed to a method for configuring radiation characteristics of an antenna, the antenna including, among other things,

- a plurality of radiating elements,
- wherein each of said radiating elements is associated with at least a respective signal processing chain located in an antenna unit that is integral to the antenna, said at least one respective signal processing chain comprising:
  - at least one module for weighting digital signals, the at least one module configured to apply at least a weighting coefficient to a digital signal; and
  - at least one antenna conversion set interposed between said at least one module for weighting digital signals and a respective one of the radiating elements of the antenna, said antenna conversion set being configured to convert between digital signals processed by the at least one module for weighting digital signals and analog signals transmitted and received at a radiating element.

Judd, Buscaglia, Ylitalo, and Rhodes, regardless of whether they are viewed individually or as a whole, fail to disclose or render obvious at least this subject matter recited in independent claim 33.

The Office Action mailed February 4, 2009 conceded that Judd “fails to disclose at least one module for weighting digital signals.” Office Action mailed February 4, 2009 at 3-4. Therefore, because Judd fails to disclose “at least one module for weighting digital signals” it necessarily also fails to disclose “respective signal processing chain located in an antenna unit that is integral to the antenna said at least one respective signal processing chain comprising: at least one module for weighting digital signals . . . .” Thus, the Office Action mailed February 4, 2009 previously acknowledged that Judd fails to disclose at least a module for weighting digital signals that is integral to the antenna.

In an apparent effort to remedy this deficiency of Judd, the Office Action states that Judd “fail[s] to disclose [that] the radiating elements [are] integral to the antenna” and asserts that Buscaglia discloses “a plurality of antenna units AU1-AU10, provided with corresponding antenna A as disclosed in fig. 1, fig. 4 and paragraphs 81 and 111.” Office Action mailed July 30, 2009 at 4. Regardless of whether Buscaglia discloses radiating elements that are integral to an antenna, which Applicant does not concede, Buscaglia does not disclose “a module for weighting digital signals that is integral to the antenna,” as recited in Applicant’s independent claim 33. In fact, Buscaglia is altogether silent with respect to a module for weighting digital signals, and does not render obvious such subject matter. For at least this reason, Buscaglia fails to remedy the previously-

conceded deficiency of Judd (i.e., that Judd fails to disclose a module for weighting digital signals that is integral to the antenna).

Ylitalo, which was cited only for its purported disclosure of a module for weighting digital signals does not disclose (nor does it render obvious) “at least one module for weighting digital signals” that is part of “a signal processing chain located in an antenna unit that is integral to the antenna,” as recited in Applicant’s independent claim 33. (Emphasis added). In fact, Ylitalo is silent with respect to the weighting module as integral to the antenna itself, and does not suggest or render obvious such a feature. Therefore, Ylitalo fails to remedy the above-outlined deficiencies of Judd and Buscaglia.

Rhodes, which was cited only for its purported disclosure of “a single optical link” does not remedy the deficiencies of the hypothetical combination of Judd, Buscaglia, and Ylitalo, as described above, because disclosure of a single optical link does not constitute (nor does it render obvious) “at least one module for weighting digital signals” that is part of “a signal processing chain located in an antenna unit that is integral to the antenna,” as recited in Applicant’s independent claim 33.

Similarly, independent claims 64 and 68, from which claims 65-67 and 69 ultimately depend, each recite a method for configuring radiation characteristics of an antenna comprising “receiving, at an antenna unit integral to the antenna, a data signal and a control signal on the same communication link, the data signal corresponding to one or more digital signals to be processed in the antenna unit and the control signal including information indicating at least one weighting coefficient to be applied by modules for weighting digital signals that are housed within the antenna unit.” As outlined above with respect to independent claim 33, Judd, Buscaglia, Ylitalo, and

Rhodes, regardless of whether they are viewed individually or as a whole, fail to disclose or render obvious “modules for weighting digital signals that are housed within the antenna unit” where the “antenna unit is integral to the antenna.” (Emphasis added).

Because Judd, Buscaglia, Ylitalo, and Rhodes fail to disclose all of the subject matter recited in independent claim 33, the Office Action “must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.” M.P.E.P. § 2141(III). Applicant respectfully submits that the Office Action has failed to articulate any rationale in purported support of why the differences between the subject matter recited in claim 33 and the alleged prior art would have been obvious to a person having ordinary skill in the art at the time the invention was made.

For at least the reasons outlined above, the Office Action fails to establish a *prima facie* case of obviousness with respect to independent claims 33, 64, and 68. Furthermore, each of claims 34-36, 38-46, 65-67, and 69 depend either directly or indirectly from one of independent claims 33, 64, and 68 and should be allowable for at least the same reasons as claims 33, 64, and 68 are allowable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection with respect to claims 33-36, 38-46 and 64-69.

**B. Amended Independent Claims 47, 61, and 63**

Amended independent claims 47, 61, and 63, from which claims 48-50, 52-60, and 62 ultimately depend, each recite “an antenna unit integral to the antenna and comprising one or more signal processing chains associated with the plurality of

radiating elements, the antenna unit further comprising: at least one module for weighting digital signals, the at least one module configured to apply at least a weighting coefficient to a digital signal; and at least one antenna conversion set interposed between said at least one module for weighting digital signals and a respective one of the radiating elements of the antenna, said antenna conversion set being configured to convert between digital signals processed by the at least one module for weighting digital signals and analog signals transmitted and received at a radiating element.” As outlined above with respect to independent claim 33, Judd, Buscaglia, Ylitalo, and Rhodes, regardless of whether they are viewed individually or as a whole, fail to disclose or render obvious “modules for weighting digital signals that are housed within the antenna unit” where the “antenna unit is integral to the antenna.”

Because Judd, Buscaglia, Ylitalo, and Rhodes fail to disclose all of the subject matter recited in independent claims 47, 61, and 63, the Office Action “must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.” M.P.E.P. § 2141(III). Applicant respectfully submits that the Office Action has failed to articulate any rationale in purported support of why the differences between the subject matter recited in claims 47, 61, and 63 and the alleged prior art would have been obvious to a person having ordinary skill in the art at the time the invention was made.

For at least the reasons outlined above, the Office Action fails to establish a *prima facie* case of obviousness with respect to independent claims 47, 61, and 63. Furthermore, each of claims 48-50, 52-60, and 62 depend either directly or indirectly from one of independent claims 47, 61, and 63 and should be allowable for at least the

same reasons as claims 47, 61, and 63 are allowable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection with respect to claims 47-50 and 52-63.

**C. Dependent Claims 37 and 51**

In the Office Action, claims 37 and 51 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Judd, Buscaglia, Ylitalo, Rhodes, and further in view of Wang. Claims 37 and 51 depend from independent claims 33 and 47, respectively, which are allowable for at least the reasons outlined above. Wang, which was cited only for its purported disclosure of an RF processor that downconverts received RF signals for baseband processing, does not remedy the deficiencies of Judd, Buscaglia, Ylitalo, and Rhodes outlined above. Therefore, the 35 U.S.C. § 103(a) rejection of dependent claims 37 and 51 cannot be maintained and should be withdrawn.

**III. Conclusion**

In view of the foregoing remarks, Applicant respectfully requests reconsideration and reexamination of this application, withdrawal of the claim rejections, and timely allowance of pending claims 33-69.

The Office Action contains characterizations and assertions regarding the claims and the cited art with which Applicant does not necessarily agree. Unless expressly noted otherwise, Applicant respectfully declines to automatically subscribe to any characterizations or assertions included in the Office Action.

If the Examiner believes that a conversation might expedite prosecution of this application, the Examiner is cordially invited to call Applicant's undersigned representative.

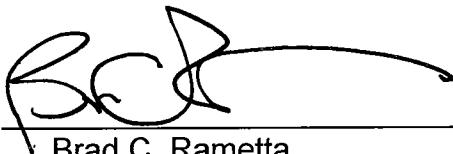


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Respectfully submitted,

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